

Title (en)

DIE CASTING OF HIGH TEMPERATURE MATERIAL

Title (de)

DRUCKGIESSEN VON HOCHTEMPERATURMATERIALIEN

Title (fr)

MOULAGE SOUS PRESSION DE MATIERES A HAUTE TEMPERATURE

Publication

EP 1152851 B1 20070801 (EN)

Application

EP 99967586 A 19991222

Priority

- US 9930810 W 19991222
- US 11416798 P 19981223

Abstract (en)

[origin: WO0037201A1] A die casting machine (18) includes a melting unit (24), a horizontal shot sleeve (30) in fluid communication with die cavity (36) for receiving molten titanium from the melting unit (24), and a plunger (40) sealing and moveable engagement with the shot sleeve (30) for forcing molten material from the shot sleeve (30) into the die cavity (36). The melting unit (24), the shot sleeve (30) and the die cavity (36) are maintained in a non-reactive environment. The material is melted to a low superheat, e.g. less than about 200 DEG F/95 DEG C. Molten material is then transferred from the melting unit (24) to the shot sleeve (30) to fill not more than about one half of the shot sleeve volume. The molten material is injected from the sleeve (30) into the die cavity (36) using the plunger (40) for solidification in the die cavity (36). The resulting articles have a fine average grain microstructure and are characterized by an absence of flowlines.

IPC 8 full level

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B22D 17/00 (2013.01 - EP KR); **B22D 17/10** (2013.01 - EP); **B22D 21/005** (2013.01 - EP); **B22D 21/025** (2013.01 - EP)

Cited by

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